

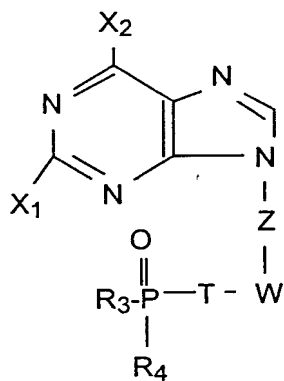
WHAT IS CLAIMED IS:

1. A compound of the formula:

5

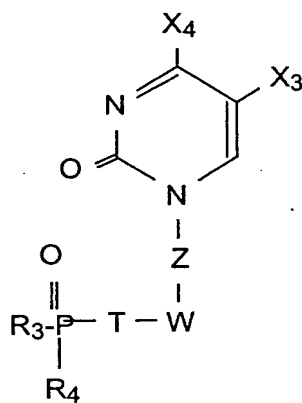
10

15



Formula I

or



Formula II

20

the stereoisomeric forms and mixtures thereof, tautomeric forms and the pharmaceutically acceptable salts thereof, wherein

25

X_1 is H or NH_2 ;

X_2 is OH or NH_2 ;

X_3 is H or CH_3 ; and

X_4 is NH_2 or OH;

Z is nothing, CH_2 , CH_2CH_2 , CH_2O , or CH_2OCH_2 ;

30

35

5

W is

R_1 R_2

W_a

R_1 R_2

C

W_b

R_1 R_2

W_c

10

W_d

, or

R_1 R_2

C

W_e

T is nothing, T' or T", wherein

T" is $\text{CH}=\text{CH}-\text{CH}(\text{OH})$, $\text{CH}=\text{CH}-\text{CH}(\text{CH}_2\text{OH})$, CH_2OCH_2 , $\text{CH}_2\text{OCH}(\text{CH}_2\text{OH})$, $\text{CH}_2\text{CH}(\text{CH}_2\text{OH})\text{CH}_2$, $\text{CH}_2\text{CH}_2\text{CH}(\text{OH})$, $\text{CH}_2\text{CH}_2\text{CH}(\text{CH}_2\text{OH})$, or $\text{CH}_2\text{CH}_2\text{CH}(\text{CH}_2\text{F})$;

provided that when T is CH=CH or CH₂CH₂, W is W_c, and Z is CH₂, then X₁ is not NH₂ and X₂ is not OH simultaneously;

provided that when T is nothing then W is not W_c ,

provided that when Z is CH₂ and W is W_a, then T cannot be CH=CH, and

provided that when Z is nothing and W = W_c, then T is not
5 CH=CH.

2. The compound of claim 1 wherein
when W = W_a or W_b and T = T" then Z is not CH₂OCH₂;
when W = W_c or W_d and T = T' then Z is not CH₂OCH₂;
or when W = W_c or W_d and T = T" then Z is CH₂.

10

3. The compound of claim 1 wherein W is W_a or W_c.

4. The compound of claim 1 wherein T is T' and T' is CH=CH.

15

5. The compound of claim 1 wherein T is T" and T" is CH₂OCH₂.

6. The compound of claim 1 wherein Z is CH₂ or CH₂O.

20

7. The compound of claim 1 wherein the compound is
E-9-(5-Dihydroxyphosphoryl-3-methylidene-4-pentenyl)guanine;
E-9-[(4-Dihydroxyphosphoryl-2-methylidene-3-butenyloxy) methyl]guanine;
25 9-(3-Dihydroxyphosphorylmethoxy-2-methylidene propyl)guanine;
Z-9(4-Dihydroxyphosphorylmethoxy-2-butenyl)guanine;
9-(4-Dihydroxyphosphorylmethoxy-2-butynyl)guanine;
30 or 9-(3-Dipivaloylmethoxyphosphonylmethoxy-2-methylidenepropyl) guanine.

8. The compound of claim 1 wherein X₁ is NH₂ and X₂ is OH.

35

9. The compound of claim 1 wherein the compound is only from Formula I.

10. A pharmaceutical composition comprising a compound of claim 1 in combination with a pharmaceutically acceptable carrier.

5

11. A compound according to claim 1 for use in the treatment of a viral infection of DNA viruses, retroviruses or viruses involved in tumor formation.

10

12. A compound according to claim 1 for use as a pharmaceutically active compound.

15

13. Use of a compound according to claim 1, optionally in combination with a pharmaceutically acceptable carrier for the preparation of a pharmaceutical composition for the treatment of a viral infection of DNA viruses, retroviruses or viruses involved in tumor formation.

20

25

30

35